

REMARKS

This is in response to the Official Action currently outstanding with regard to the present application, which Official Action the Examiner has designated as being FINAL

Claims 1-23 were pending in this application at the time of the issuance of the currently outstanding Official Action. The foregoing Amendment proposes the amendment of Claims 1 and 18. The foregoing Amendment does not propose that any claims be added, canceled or withdrawn. Accordingly, in the event that the Examiner grants the entry of the foregoing amendment, Claims 1-25 as hereinabove amended will constitute the Claims under active prosecution in this application.

More particularly, in the currently outstanding Official Action the Examiner has:

1. Acknowledged Applicants' claim for foreign priority under 35 USC §119 (a)-(d) or (f), and confirmed the receipt of the required copies of the priority documents by the United States Patent and Trademark Office;
2. Accepted the drawings as filed with this application on 4 December 2003;
3. Rejected Claims 1 and 18 under 35 USC §103(a) as being unpatentable over the Kobayashi reference (JP 08-1850630 in view of the Komuro reference (JP 7-319308);
4. Rejected Claims 19-23 under 35 USC §103(a) as being unpatentable over the Kobayashi reference in view of the Komuro reference further in view of Toyama et al. (US Patent No. 6,175,716);
5. Indicated that Claims 2-10, 12-13 and 15-17 are objected to as being dependent upon a rejected base claim, but that those claims would be allowable if rewritten in independent form including all of the limitations of their respective base claims and any intervening claims.

No further comment regarding items 1-3 above is deemed to be required in these Remarks.

Claims 1 and 18 are rejected under 35 USC 103(a) as being unpatentable over Kobayashi (JP 08-185063 A) in view of Komuro (JP 7-319308 A). Applicants respectfully traverse this rejection.

Claims 1 and 18 (the only independent claims in this application) have been amended above for purposes of clarity. Specifically, both Claims 1 and 18 have been amended so as to recite:

the one or more lead edge portions of the at least one of the sheet or sheets of paper being transported from at least one of the paper transport means, with one or more lead edge portions of said sheet or sheets of paper being oriented along a trajectory toward at least one of the transfer means which is located on the opposite side of the plane therefrom

Applicants respectfully submit that the Kobayashi reference discloses an image carrier, a transfer means and a paper transfer means much as herein claimed. Further, the Examiner has conceded that the Kobayashi reference does not disclose paper sheets being transported along a trajectory toward his transfer means. Thus, it will be recognized that in Kobayashi the transfer material 11b coming from the registration rollers 5 along the transfer guide 6 on the image carrier side of the plane tangent to the image carrier 1 and the transfer roller 28 at the nip N between them is directed so as to follow the surface of the photoreceptor (image carrier) 1. Accordingly, the leading edge of an incoming paper sheet will enter the nip N along the plane tangent to the image carrier and the transfer roller. The result, therefore, is that Kobayashi fails to teach, disclose or suggest that at least one of the paper sheet or sheets is transported from at least one of the paper transport means along a trajectory toward at least one of the transfer means on the opposite side of the plane.

To fill this gap in the disclosure of the Kobayashi reference, the Examiner relies upon the Komuro reference.

However, at paragraph [0041], Komuro teaches that “According to the present embodiment as shown in Figs. 1 and 2, the recording paper 32 is arranged to be delivered from the side of the transfer roller 28 relative to the tangent S which extends through the center N of the nip 29 formed between the transfer roller 28 and the photosensitive drum 12. The angle α between the delivery direction of the recording paper 32 and the tangent S is set at 8° .” (i.e., the leading edge of the paper is directed toward the photosensitive drum at an angle of about 8° to the plane tangent to the transfer roller 28 and the photosensitive drum 12 at the nip)

The Kumuro reference further teaches in its paragraphs [0039] and [0040] that, “A transfer entrance guide 30 as a guide member is disposed to the right of the transfer roller 28 (Fig. 1). The transfer entrance guide 30 is composed of an upper guide member 30A and a lower guide member 30B which are spaced from each other by a predetermined distance. A narrow transport path 31 for passing the recording paper 32 is formed between the upper guide member 30A and the lower guide member 30B. The transport path 31 serves to guide the recording paper 32 which is transported from a paper feeder 34 and to regulate the delivery direction of the recording paper into the transfer unit.”

Accordingly it will be understood that the Komuro reference teaches “The transport path 31 guides the recording paper 32 so that it can be delivered from the side of the transfer roller 28 relative to the tangent S which extends through the center N of the nip 29 formed between the transfer roller 28 and the photosensitive drum 12.” (see, Komuro reference at Figs. 1 and 2) In particular, the transport path 31 determines the delivery direction into the transfer unit such that the recording paper 32 can be delivered into the center N of nip 29, from the side of the transfer roller 28 relative to the tangent S. (see, Komuro reference at Fig. 2)

Therefore, unlike the trajectory (i.e., the transport path) of the presently claimed invention, the transport path 31 of the Komuro reference is not oriented toward the transfer roller 28. Instead, the Komuro reference teaches that the recording paper 32 is transported along the transport path 31 which is formed inside the transfer guide 30 and oriented toward the center N of the nip 29 at a slight angle to the plane extending through the nip tangent to both the transfer roller 12 and the photosensitive drum 12 (i.e., toward the photosensitive drum 12).

In this regard it is noted that the Examiner has indicated that “Komuro teaches at least one of the sheet or sheets of paper being transported from at least one of the paper transport means along a trajectory (Fig. 1) toward at least one of the transfer means on the opposite side of said plane therefrom”. Applicants respectfully disagree.

Contrary to the Examiner’s position, however, Applicants respectfully submit that in the Komuro reference the trajectory of the leading edge of the paper established by the element 30 is toward the image carrier (photosensitive drum 12) , not along a trajectory toward at least one of the transfer means from the opposite side of the plane tangent to the image carrier and the transfer roller at the nip. In other words, in the Komuro reference it is not the transfer means as herein claimed that is “located on the opposite side of the plane more or less tangent to the nip” from the transport means as herein claimed, but rather the image carrier (i.e., the photosensitive drum) that is “located on the opposite side of the plane more or less tangent to the nip” from the transport means.

Accordingly, Applicants further respectfully submit that the advantages of the present invention in avoiding situations in which the leading edge of the paper hits the photosensitive body surface at an angle discussed at pages 5-9 of the present specification by directing the leading edge of the paper from pinch rolls on the image carrier side of the plane tangent to the image carrier and the transfer roller at the nip are not disclosed, taught or suggested by the Komuro reference as the Examiner has alleged.

Claims 2-7, 24 and 25 have been objected to on the basis of their direct or indirect dependency upon a rejected base claim, but have otherwise been indicated to be allowable. Applicants respectfully submit that Claim 1 as hereinabove amended for clarity is now in condition for allowance in view of the foregoing discussion of the Kobayashi and Komuro references. Hence, Applicants respectfully submit that Claims 2-7, 24 and 25 also are now in condition for allowance.

Finally, Applicants respectfully note that Claim 18 (which has been amended hereinabove for clarity in the same manner as Claim 1) is directed to a paper transport method whose substantial feature is to transport paper utilizing the apparatus of Claim 1. Accordingly, Applicants respectfully submit that the currently outstanding rejection of Claim 18 (and Claims 19-23 that depend therefrom) as hereinabove amended is overcome for the same reasons as discussed above concerning Claim 1.

For each and all of the foregoing reasons and in view of the foregoing clarifying amendment, Applicants respectfully submit that a person of ordinary skill in the art at the time that the present invention was made would not have reached the present invention based upon the Kobayashi and Komuro references as suggested by the Examiner. Accordingly, a decision withdrawing the currently outstanding rejections of the claims of this application and passing the application to issue in response to this communication is respectfully requested.

Applicants also believe that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. 04-1105, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

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SIGNATURE OF PRACTITIONER

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